LEE VINING CREEK HYDROELECTRIC SYSTEM, TRIPLEX COTTAGE
(Lee Vining Creek Hydroelectric System, Bldg. No. 102)
Lee Vining Creek
Lee Vining Vicinity
Mono County
California

HAER No CA-180-A

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Department of the Interior
San Francisco, California

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Location: Near Mono Lake in Section 16, Township 1 North, Range 25 East, M.D.M, Mono County, California (UTM Coordinates 11/305377 /4201722), in the eastern Sierra Nevada Mountain Range about 4.6 miles west of the town of Lee Vining, California, and 274 air miles due north of Los Angeles.

Date of Construction: 1924

Builder: Southern Sierras Power Company

Present Owner: Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770

Original Use: Employee housing

Present Use: Employee housing

Significance: The triplex cottage at Poole Powerhouse (Lee Vining No. 1) was designed by G. Stanley Wilson who is recognized as one of California's master architects during the 1920s and 1930s. Wilson was a leading practitioner of the Spanish-Colonial revival style during the 1920s (Gebhard 1989). He worked mostly in Southern California and designed several buildings in the Riverside area that are listed on the National Register of Historic Places. The triplex cottage is an excellent example of Wilson's wide design talents.

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Environmental Affairs Division
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Date: June 15, 1996

I. DESCRIPTION

Lee Vining No. 1 plant (Poole Powerhouse) is located at about 7,800 feet elevation on the steep slopes of the eastern Sierra Nevada Mountains directly east of Tioga Pass and Yosemite National Park (Map 1; Photo CA-180-A-1). The triplex cottage is located immediately adjacent and southeast of the powerhouse building (Map 2; Photo CA-180-A-2). It is a two-story, French Eclectic style building characterized by a tall, steeply pitched hipped roof with open eaves and exposed rafters, an uncommon trait in this style (Photos CA-180-A-3 and CA-180-A-4). Three solid, poured-concrete chimneys reach several feet above the roof peak (Photo CA-180-A-5). The original wood-shingle roof has been replaced by Manville composition shingles. The structure is built on a tiered cement foundation poured on a sharp cut reaching over 40 feet into the side of the mountain (Photo CA-180-A-6), and is 45 feet across the front by 40 feet deep (Photo CA-180-A-7). Concrete stairs lead up each side of the building to two second-floor apartments (Photos CA-180-A-6 and CA-180-A-10). Metal railings have replaced original wood railings on the staircases to the second floor and the first floor entryway porch. The west side stairs are covered with corrugated plastic on a wood frame (Photos CA-180-A-6, CA-180-A-8, and CA-180-A-9). A retaining wall to the rear of the structure is integral to its structural integrity and forms with the back wall of the house a walkway (later roofed with corrugated plastic) which connects to the powerhouse (Photos CA-180-A-11 and CA-180-A-12). The walkway provides access between between the powerhouse and the triplex cottage when winter snow drifts render impossible any outside entry. The retaining wall underwent major reconstruction in 1952 (California Electric Power Company 1952).

Each of the three apartments within the triplex cottage measure 23.4 feet by 48.2 feet and are comprised of a central living room, two bedrooms, a kitchen with walk-in pantry, and bathroom (Photo CA-180-A-13). Each apartment is laid out in the same simple floor plan with each room opening one to the other with no halls. The bottom floor apartment is orientated with its long axis east/west. The second floor apartments are orientated parallel to each other with their long axes orientated north/south. All three apartments have primary exterior entrances through the living room with the same design: a front door flanked by paired double-hung, wood-framed windows. The first floor apartment primary entrance is on the north or logical front of the structure. The second floor apartments have their primary entrances on the east and west sides of the house at the top of a flight of concrete stairs (Photos CA-180-A-6, CA-180-A-8. and CA-180-A-10). The first floor apartment primary entrance and the second floor east side apartment primary entrance are shaded by a simple overhang supported by Craftsman style knee braces (Photo CA-180-A-4).

A special consideration of the architect in designing this house was to provide maximum sunlight to the building interior. This was deemed a necessity for two reasons: one, during the

four months of winter the house in continually in the shadow of Lee Vining Canyon, and two, the structure is built into the side of the mountain (for protection against avalanche), thus limiting (especially on the first floor) natural lighting on the south or back side of the house. The result was a liberal use of paired and grouped window arrangements, unusual elements on the main house block of Eclectic styles.

The first floor apartment living room is lighted by paired 4-light over 4-light, double-hung, wood-frame windows flanking a solid door with a single undivided window panel, and two ceiling fixtures (Photo CA-180-A-14). Wide baseboard and a narrow cornice frame the walls. The west wall is pierced by doorways leading to the kitchen and bathroom (Photo CA-180-A-15). An iron wood-burning stove is located between the west wall doors. The living room floor is hardwood, as is the subflooring in every room. The hardwood was typically covered by carpeting in the living rooms and bedrooms to help ward off the deep winter cold. Originally plaster-coated like the walls, the ceiling is acoustical tile.

Paired 6-light over 6-light double-hung, wood-frame windows with a wall light fixture between, and a single ceiling fixture light the kitchen (Photos CA-180-A-16 and CA-180-A-17). Decorative elements on the built-in cabinetry mimic those on the exterior of the original double-hung, wood-frame windows. The kitchen floor is linoleum and the walls are wallpapered. The walk-in pantry is accessed through a door on the south wall of the kitchen. The pantry has wood shelving along the walls and is lighted by a single ceiling fixture and a wood-frame casement window on the west wall (Photo CA-180-A-18).

The bathroom has built-in cabinetry along the south wall, and is lighted by a 6-light wood-frame casement window and a fixture over the mirror above the sink (Photo CA-180-A-19). The original bathtub has been replaced by a showerstall. The bathroom was heated by a wall fixture vented through the wall below the casement window. The floor is linoleum.

The front or north bedroom is lighted by a group of three 6-light over 6-light double-hung, wood-frame windows and a single ceiling fixture (Photo CA-180-A-20). A walk-in closet occupies the west wall (Photo CA-180-A-21). The original closet louvered doors have been replaced. Like the living room, the north bedroom walls are framed by a wide baseboard and narrow cornice. Floors are carpeted. The north and east walls are papered. The ceiling is acoustical tile.

The south or back bedroom is lighted by a single set of paired 6-light over 6-light double-hung, wood-frame windows and a single ceiling fixture (Photo CA-180-A-22). Two wood shelves are mounted next to the windows with metal braces. Walls are framed with a wide baseboard and a narrow cornice. Flooring is carpet.

The second floor east side apartment differs only slightly from the first floor apartment. The living room lighting is by way of two ceiling fixtures and paired 4-light over 1-light double-hung, wood-frame windows flanking a paneled front door with a single frame fixed window (Photo CA-180-A-23). Walls are framed by a wide baseboard, but there is no cornice. Doorways to the kitchen and bathroom enter the living room from the south wall (Photo CA-180-A-24; doorways from the two bedrooms enter the living room from the north wall. An iron wood-burning stove probably like that in the first floor apartment occupied the living room floor next to the bathroom door. Flooring is carpet.

The kitchen is lighted by a single ceiling fixture, grouped three 6-light wood-frame casement windows above the sink, and a wall fixture above the windows (Photo CA-180-A-25). The casement windows open to the walkway behind the house. A doorway on the west wall leads to the walk-in pantry (Photo CA-180-A-26). Another doorway on the east wall opens to the walkway at the back of the house (Photo CA-180-A-25). The 1-light wood-framed casement window in the walk-in pantry opens to the walkway at the rear of the house (Photo CA-180-A-27), as does the single louvered window in the bathroom (Photo CA-180-A-28).

The original wood-frame windows in the east or front bedroom have been replaced with aluminum sliding-glass windows with curtain valances installed above (Photo CA-180-A-29). The windows in the west or back bedroom are 6-light over 6-light double-hung, wood-frame in a paired arrangement (Photo CA-180-A-30). The closet in this room retains the original louvered doors. A decorative wood trim frames the upper wall.

The second floor west side living room is lighted by a two ceiling fixtures and 4-light over 4-light double-hung, wood-frame windows in paired arrangement flanking a panel door with an unusual 8-light fixed window (Photo CA-180-A-31). An iron wood-burning stove would have sat between the kitchen and bathroom doorways along the south living room wall. The stove has been removed and the vent hole through the wall covered over (Photo CA-180-A-32).

The kitchen (Photos CA-180-A-33 and CA-180-A-34), pantry, and bathroom (Photo CA-180-A-35) are the mirror images of these same rooms in the second floor east side apartment except that the west side apartment kitchen walls are not wallpapered. The east or back bedroom opens into the living room through the living room north wall; a second door opens into a walk-in closet (Photo CA-180-A-36). The windows in this bedroom are a mirror image of the east side second floor back bedroom (CA-180-A-37). The front or west bedroom, unlike the east side second floor apartment front bedroom, retains the original 6-light over 6-light double-hung, wood-frame windows in paired arrangement on the west wall (Photo CA-180-A-38) and single arrangement on the north wall.

II. HISTORICAL CONTEXT

The triplex cottage at Poole Powerhouse was designed by G. Stanley Wilson, a gifted architect based in Riverside, California. He was a leading practitioner of the Spanish-Colonial revival architectural style during the 1920s, and was known for producing very high quality work (Gebhard 1989). Wilson was a self-taught architect who began his career as a draftsman and carpenter. He did most of his design work in Riverside and other parts of southern California. Among his most recognized works in Riverside are the Riverside-Arlington Heights Fruit Exchange, the Solders Memorial Municipal Auditorium, and the Simons Mortuary; all are listed on the National Register of Historic Places. In the early 1930s he also designed the International Wing of the Mission Inn, a National Landmark structure. Wilson probably came to design the triplex cottage, located far from his normal base of operation, because the builder, the Southern Sierras Power Company, was also headquartered in Riverside.

Hydroelectric development on streams in the Mono Basin have their roots in support of local mining operations. However, by December 1923 and October 1924 respectively when Lee Vining Creek No. 3 and No. 1 Powerhouses went on line, the power generated was directed to the burgeoning Southern California market.

James Stuart Cain and Delos Allen Chappell are the two men most closely associated with development of the Lee Vining Creek Hydroelectric System. In the 1880s, Cain made his fortune in gold mining in the historic boom-town of Bodie, California, and began investing in a wide variety of Mono County businesses--from banking to mining to power development. As a stockholder of the Standard Consolidated Mining Company, Cain witnessed the delivery of electricity from the Green Creek Power Plant, seven miles above Bridgeport, to the Standard Mill in Bodie in 1893. Sparked by the success of the Green Creek plant, Cain began investigating other sites suitable for hydroelectric development in Mono County. Among the sites he found suitable was Lee Vining Creek at the head of Silvester Meadows. Between 1903 and 1907, Cain and associates posted notices of appropriation of water rights, surveyed for dam sites, bought-out a competing irrigation company (tbe California-Nevada Canal, Water and Power Company), and secured federal right-of-ways over public lands to construct irrigation reservoirs and numerous ditches and flumes in the Rush and Lee Vining Creeks area (Diamond and Hicks 1988:7 & 8).

After a successful career developing and managing coal mining ventures in Colorado, Delos Allen Chappell sold out his Colorado holdings and moved to California where in 1907 he became president of the Nevada-California Power Company. The Nevada-California Power Company was then in the process of developing power generation on Bishop Creek, located about forty five miles south of Lee Vining Creek, and supplying electricity to the mining communities of southwestern Nevada. Chappell soon became aware of the power

developments planned for the Mono Basin, including Lee Vining Creek, and perceived these developments so close to his Company's market as a threat to the its existence. Chappell promptly made plans to obtain control of these "outside" interests (Diamond and Hicks 1988:9).

During the period 1907 to 1917, a long series of complicated stock purchases and transfers, incorporations, legal maneuvers, and business transactions occurred which eventually led to the California-Nevada Electric Corporation[1] gaining control of all the Mono Basin hydroelectric projects including Lee Vining Creek. The prime players in this corporate dance were Cain and Chappell, although ironically neither man played a significant role in the construction of the Lee Vining Creek developments. Chappell died in February 1916 after slipping on an icy sidewalk and suffering a compound fracture. Cain, whose interests were eventually obtained in the dealing, lived many more years, but concentrated his efforts on two mining projects in Mono County, neither of which proved successful (Diamond and Hicks 1988:9-12).

By 1917, the Nevada-California Power Company, a operating subsidiary of the California-Nevada Electric Corporation had developed plans to construct a series of hydroelectric plants on Lee Vining Creek. The plans called for construction of three power plants: Lee Vining No. 1, the uppermost plant, Lee Vining No. 2, the middle plant, and Lee Vining No. 3, the lowest and smallest plant. Initial developments proceeded slowly, with efforts directed to construction of plant No. 1. Because of the remote and rugged terrain, and the high altitude of the plant and reservoir sites most of the early stages of the project (1917 to 1922) were concerned with installing a transmission line from the Company's Mill Creek plant to the construction sites, development of a transportation route, establishment of construction camps, and preliminary work on the reservoir, tunnel, and powerhouse sites. The Company had a hard time hiring and keeping men on the job, and went to considerable trouble to make living and working conditions as pleasant as possible (Diamond and Hicks 1988:25-26).

After 1922, control of the Lee Vining Creek development was acquired by Southern Sierras Power Company, another operating subsidiary of the California-Nevada Electric Corporation. Southern Sierras Power Company served the Southern California market and by 1922 was desperately in need of additional sources of energy. Southern Sierras pushed hard for completion of the Lee Vining plants. Lee Vining No. 3, begun in March 1923, was completed in just 292 days--the shortest construction period of any of the Company's plants. Under construction for several years, the Lee Vining No. 1 plant was finally completed in September

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[1] Incorporated in 1914 as a holding company for Nevada-California Power Company, Southern Sierras Power Company, and a series of other associated entities.

1924, largely due to the efforts of Southern Sierras Power Company's chief engineer, Charles Oscar Poole, whose name the plant would eventually acquire. Powerhouse No. 1 and the reinforced concrete triplex cottage (also known as the "three family house"), machine shop, and garage associated with it were built into cuts in the side of the mountain so that the overhang might help deflect any possible damage caused by snowslides.

At the end of 1924, Southern Sierras Power company had completed most of the work on the Lee Vining Creek Development originally conceived by the Nevada-California Power Company back in 1917. The planned Lee Vining No. 2 plant, however, was never built (Diamond and Hicks 1988:26 and 32).

During the 1930s, two developments occurred which effectively limited future use of Lee Vining Creek resources by the Southern Sierras Power Company and its successors. The first involved a water rights conflict with the City of Los Angeles. The conflict was resolved in 1933, and as a result of the settlement, Lee Vining Creek No. 3 plant would cease to function as a powerhouse (it was converted in 1940 to an electrical substation) and improvements were limited to the area above Powerhouse No. 1.

The other development affecting the Lee Vining Creek System was Southern Sierras Power Company's loss of Imperial and Coachella Valley's electrical utility business. In 1936, the Imperial Valley Irrigation District (IID) secured a low-interest Federal Rural Electrification Administration loam and entered the electric utility service in direct competition with Southern Sierras Power Company. Over the next seven years, Southern Sierras Power Company, then Nevada-California Electric Corporation (which took direct control of Southern Sierras Power Company in 1937), and finally California Electric Power Company (which took over Nevada-California Electric Corporation's holdings in 1941) tried first to compete--and later to cooperate--with the new district's management. When such efforts failed, California Electric Power Company sold its Imperial and Coachella Valley service area to IID in 1943 in exchange for assurances that IID would not try to encroach further on California Electric Power Company (or CalElectric) service territory (Diamond and Hicks 1988:33).

The properties of CalElectric were acquired by Southern California Edison Company (SCE) in 1964 through a merger consolidation. SCE is the present operator of the Lee Vining Hydroelectric System. The Lee Vining System has served the electrical generation needs of the Nevada-California Power Company/Southern Sierras Power Company/California Electric Power Company/Southern California Edison Company from 1923 up to the present. Lee Vining (and for that matter, hydroelectric generation in general) contributes an increasingly smaller portion of the Company's total generation mix. Because of its low capacity factor (by modern standards), high relative maintenance costs per kilowatt-hour generation, and

comparatively burdensome regulatory operational environment, Lee Vining and other hydroelectric plants of its era face difficult economic times.

III. SOURCES

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Gebhard, David
1989 Architectural historican, University of California at Santa Barbara. Telephone interview with James C. Williams, January 14.

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1989 Evaluation of the Historic Resources of the Rush Creek and Lee Vining Creek Hydroelectric System. Report to the Southern California Edison Company. Fair Oaks: Theodoratus Cultural Research, Inc.

IV. PROJECT INFORMATION

This Historic American Engineering Record documentation of the Lee Vining No. 1 Powerhouse (Poole Powerhouse) triplex cottage was undertaken because remote, unattended operation of this powerhouse renders onsite housing of operation and maintenance employees no longer necessary. Once vacant, these employee housing structures tend to deteriorate rapidly and can become attractive nuisances subject to vandalism and vagrants. Because of the unique building foundation, remote location, and narrow access road moving the building to an another site was not deemed a feasible alternative to demolition.

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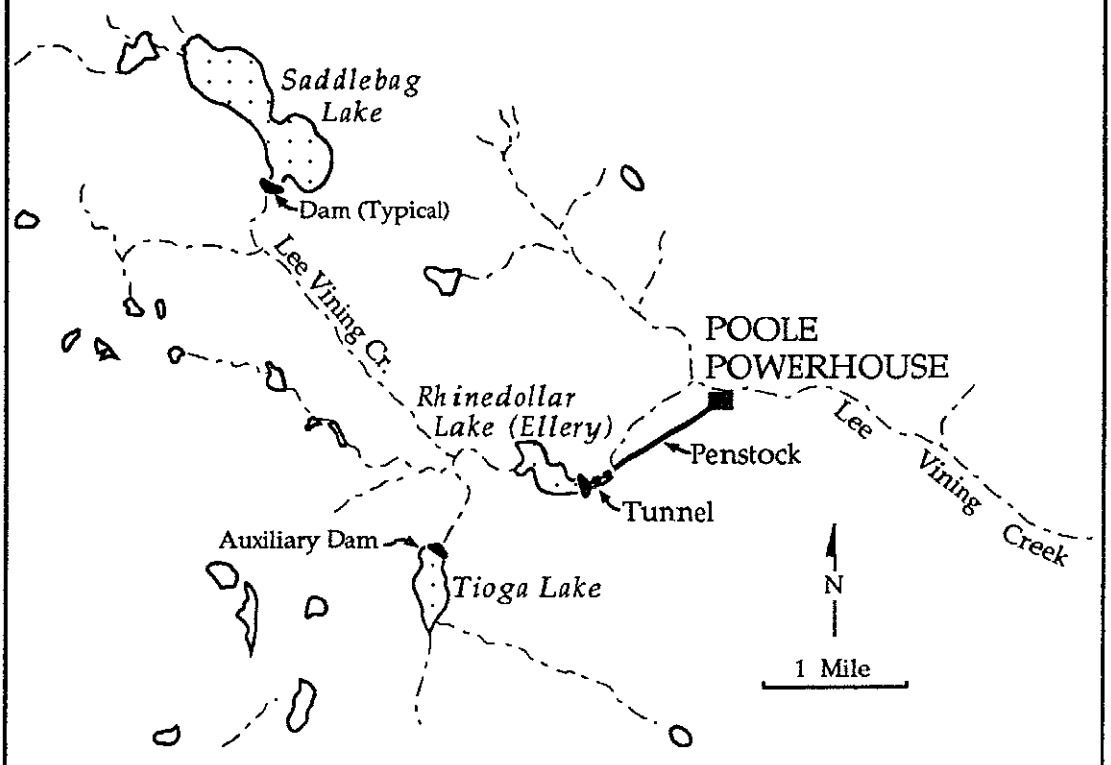

Map 1

Lee Vining Creek Hydroelectric System, Triplex Cottage
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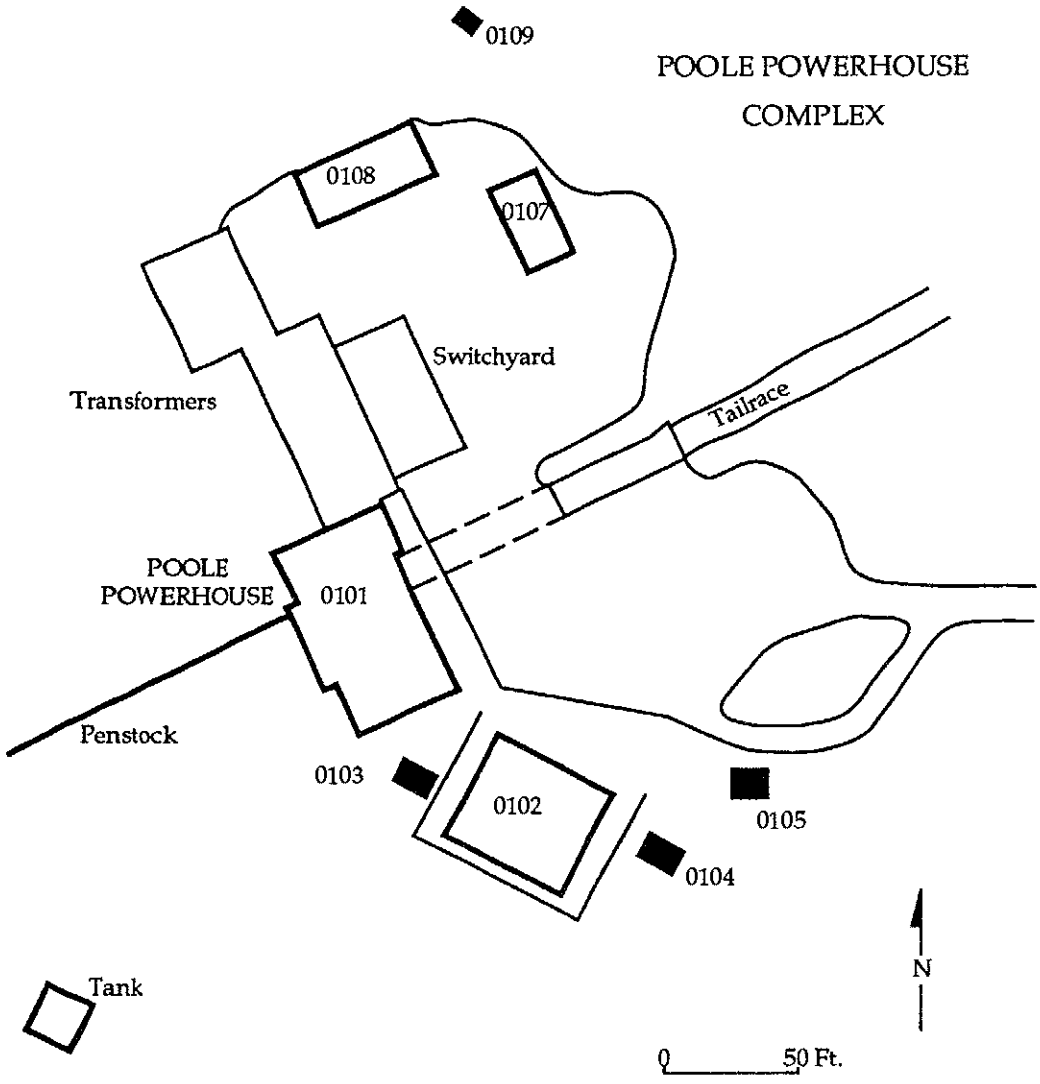

Map 2